

Online MSc Project Registration System for Applied Science

A thesis submitted to Graduate Department of Computer Science,
College of Arts and Sciences, in partial fulfillment of the requirements
for the degree of Master of Science (Information Technology)

University Utara Malaysia

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CHAPTER ONE

INTRODUCTION

This chapter will come out with brief introduction to online registration systems, university applications, which will discuss in this project. From the problem identified in the problem statement, the main objectives of this study are to develop a web based system using ASP.NET.

1.1 Study Background

The Internet has been extremely popular as a basic infrastructure for providing world-wide distributed services to end customers. The Internet's economics are sustainable, improve, and will become the benchmark by which users will measure other communication alternatives (McInerney, 1997). The Internet continues its triumphant advance projections based on its current growth rate point to over 1 million computer networks and well over 1 billion users connected by the end of the century (Oppliger, 1995). The internet has changed society, enterprises and life style rapidly, and ushered in a new era of industrial revolution (Akikusa, 2000). Multi-function Internet Appliances solve both the problem of driving the consumer into the store, and the purchase decision once they reach the store (Soohoo, 1997).

The contents of
the thesis is for
internal user
only

6.2 Limitation

The project use only for registration MSc final project. To contact between a lecturer and the student.

The system has limited functionality due to time limitation and not uploaded in the internet.

6.3 Future Work

For future work, some enhancement can be done to improve this system to reduce the limitation; there are several options that can be used.

- a. The system can improve to extend the users with add the features for the department staff to complete the registration online.
- b. The system can improve to add the evaluator to insert the student result and the corrections.

References

- Ahmad, H. U., Z.M.; Yusoff, R.Z.; (2001). "Integrated process design for e-learning: a case study." 488 - 491
- Akikusa, N. H., Y.; (2000). "Fujitsu's Internet business strategy: everything on the Internet." 3-5.
- Ali Ahmadi A.R , F. S., Majid Gheitasi (2007). "An ICT Technical Reference Model for Iran Universities." 537-542
- Asif, M. M., S.; Dragnea, R.; (2007). "Hosting Web Services on Resource Constrained Devices." 583 - 590
- Atanas Rountev, O. V., Miriam Reddoch (2006). "Static control-flow analysis for reverse engineering of UML sequence diagrams." 31(1): 96 - 102
- Atle Refsdal, K. S. (2008). "Extending UML Sequence Diagrams to Model Trust-dependent Behavior With the Aim to Support Risk Analysis." 197(2): 15-29.
- Baek;, S.-Y. P. J. (2007). "Online Registration of Multi-view Range Images using Geometric and Photometric Feature Tracking." 281 - 288
- Betty H. C. Cheng, J. M. A. (2007). "Research Directions in Requirements Engineering." 285-303
- Brondeel, M. D. W., N.; De Maeyer, Ph.; Antrop, M.; Ongena, T.; (2004). "Complementary training on contemporary positioning using a Website based application." 7: 4807 - 4809.
- Chan, P. P. W. L., M.R.; (2008). "Dynamic Web Service Composition: A New Approach in Building Reliable Web Service." 20 - 25

- Chang,, F.-C. C. T.-C. H. Y.-J. C. T.-C. (2005). "Design and implementation of Web service integration tool." 91 - 96
- Chen,, H. G. B. J. J. W. W. X. N. (2005). "A framework for application server based Web services management." 8 pp.
- Chen,, S.-Y. H. E.-P. L. C.-H. L. C.-H. (2007). "On Composing a Reliable Composite Web Service: A Study of Dynamic Web Service Selection." 184 - 191
- Cui,, H. L. G. M. L. (2005). "Digitized OA system construction of University based on web service technology." 113: 698 - 702
- Dias.F. G, E. A. S., M. L. M. Campos, A. L. Correa, A. J. Alencar (2008).
"Elaboration of use case specifications: an approach based on use case fragments." 614-618
- Diego Zuquim Guimarães Garcia, M. B. F. d. T. (2006). "Semantics-enriched QoS policies for web service interactions." 192: 35 - 44
- Gronmo, R. S., D.; Solheim, I.; Oldevik, J.; (2004). "Model-driven Web services development." 42 - 45
- Hernandez-Carrion, C. M. C. J. R. (2006). "Harnessing ICT to develop community and identity: a model for academic departments." 2(1): 70-80
- Hung, P. C. K. F., E.; Carminati, B.; (2004). "Towards Standardized Web Services Privacy Technologies." 174 - 181
- James Cornford, N. P. (2003). "Putting the University Online: Information, Technology, and Organizational Change." 144
- Junping,, W. X. W. L. (2007). "Risk Control and Estimation of Online Services Market Segmentation." 1 - 5

Karl Cox, K. T. P. (2007). "Practical experience of eliciting classes from use case descriptions." 80(8): 1286-1304

Keiichi Endo, M. K., Yutaka Takahashi (2006). "A proposal of encoded computations for distributed massively multiplayer online services " 266.

Kumar, A. P., R. Ragade, R.K. Wong, J.P. (1998). "The Virtual Learning Environment system." 2: 711-716

Labovitz, C. A., A.; Jahanian, F.; (1999). "Experimental study of Internet stability and backbone failures." 278 - 285

Lamsweerde, A. v. (2000). "Requirements engineering in the year 00: a research perspective." 5 - 19.

Lankton, N. K. W., E.V.; (2007). "Antecedents and Dimensions of Online Service Expectations." 54(4): 776 - 788

Lavery, J. B., C.; Bin Ling; Allison, C.; (2002). "Laying the foundation for Web services over legacy systems." 3 - 12

Liu;, W. C. L. L. F. (2006). "WIP: Web Service Initiation Protocol for Multimedia and Voice Communication over IP." 515 - 522

Marco Crasso, A. Z., Marcelo Campo (2008). "Easy web service discovery: A query-by-example approach." 71(2): 144-164

McInerney, F. W., S.; (1997). "The Internet's sustainable advantage." 30(6): 120, 118

Naini, V. R. S., R.S.; Tanik, M.M.; (2008). "A Web-based interactive Student Advising system using Java frameworks." 172 - 177

- Neumann, C. (1996). "Enabling commerce on the Internet." 29(4): 91 - 92.
- Nguyen, V.-D. N., V.; Stewart, C.V.; (1999). "Fast and robust registration of 3D surfaces using low curvature patches." 201 - 208
- Ni, D. M., J.; Wang, J.; (1999). "System scaling for large-scale Internet-based online services." 180 - 185
- Numprasertchai, S. P., Y.; (2006). "Enhancing University Competitiveness through ICT based Knowledge Management System." 1: 417 - 421
- Oppliger, R. (1995). "Internet security enters the Middle Ages." 28(10): 100 - 101
- Petre, M. C., L.; Price, B.; Thomas, P.; (1997). "Innovations in large-scale supported distance teaching: transformation for the Internet, not just translation." 1: 332 - 338
- Pinhanez, C. (2007). "A Services Theory Approach to Online Service Applications." 395 - 402
- Poynder, R. (1998). "Online engineering information." 8(6): 289 - 294
- R. Oppliger, A. A. (1996). "Proceedings of the 5th International Workshops on Enabling Technologies: Infrastructure for Collaborative Enterprises." 1996
- Robert Strazzarino, T. R. H. (2005). "Volunteerism: a new idea for filling university information technology needs." 372 - 375
- Salvador Báez-Franceschi, K. L., Diana Velez; (2004). "Web-based technologies: reaching their ultimate potential on restricted budgets." 336 - 339
- Schahram Dustdar, W. S. (2005). "A survey on web services composition." 1(1):1-30

Shou-de Lin; Knoblock, C. A. (2003). "Exploiting a search engine to develop more flexible Web agents." 54 - 60

Soohoo, K. (1997). "Multi-Function Internet Appliances." 14 - 18

Stewart, C. K. S. D., S.; Scott, M.L.; Jian Yin; (2004). "Profile-Driven Component Placement for Cluster-Based Online Services." 5(10): 1 - 1

Thelwall, M. (2002). "Evidence for the existence of geographic trends in university Web site interlinking." 58(5): 563 - 574.

Tørner, F. M. I., M. Ivarsson, F. Pettersson, P. Öhman (2006). "Defects in automotive use cases ": 115 - 123

Treiber, M. D., S.; (2007). "Active Web Service Registries." 11(5): 66 - 71

Ville , L. (2002). "Experiences on using ICT in university education." 1(1): 105 - 110

Wen-Yau Liang, C.-C. H., Horng-Fu Chuang (2007). "The design with object (DwO) approach to Web services composition." 29(1): 54-68

Wunnava, S. V. (1995). "Advances in Internet and interconnectivity of networks." 155 - 161

Xu, Y. W., Zhuo; Zhang, Wen-bo; (2008). "Research on a Computing Model for Internet Efficiency Index." 153 - 159

Yasuhiko, H., Tsutomu, Ayuha, Syun Tutiya (2006). "Construction and operation of a registration system in a university." 37(10): 69 - 80

Zainal A. Hasibuan, H. B. S. (2005). "The Use of E-Learning towards New Learning Paradigm: Case Study Student Centered E-Learning Environment at Faculty of Computer Science-University of Indonesia." 1026 - 1030